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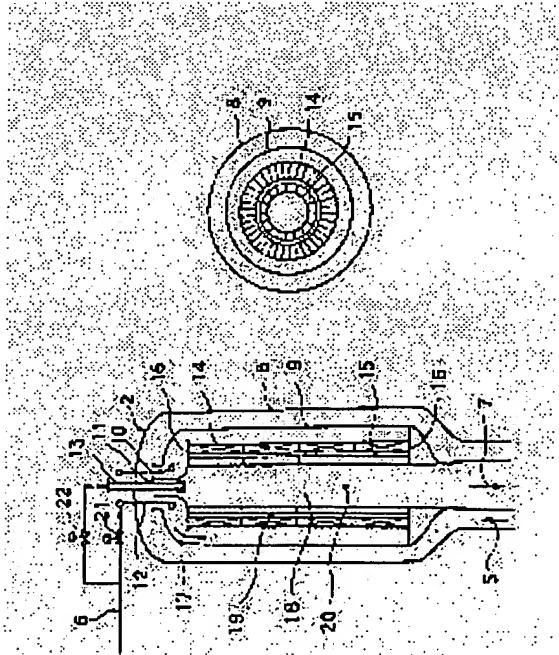
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## (54) CATALYTIC BURNER

### (57)Abstract:

**PURPOSE:** To make a catalyst for combustion highly active at low temperature and highly heat-resistant at high temperature and at the same time make it possible to burn under a high load by arranging mutually coaxially a catalytic combustion cylinder inside of an outer cylinder and a gas phase combustion cylinder which consists of a heat shielding body inside of the catalytic combustion cylinder and supplying fuel and air from one end section of the catalytic burner into both cylinders.

**CONSTITUTION:** A burner 2 consists of a double construction body which has an outer cylinder 8 which is open at its one end and an inner cylinder 9 which is open at its both ends, and in the inside of the inner cylinder 9 a catalyst body 14 for combustion and a heat shielding layer 15 inside of the catalyst body 14 are respectively arranged cylindrically. A fuel supply pipe 6 which pierces through the closed end section of the outer cylinder 8 is connected to a fuel supply port 13 through a control valve 22 inside of an air flow inlet 11 which is formed by a catalyst holding member 16, and between the inside of the air flow-in port 10 of the inner cylinder 9 and the outside of an air flow inlet 11 which is formed by the catalyst holding member 16 the fuel supply pipe 6 is connected to a fuel supply port 12 through a control valve 21. In the catalyst body 14 for combustion and a vapor phase combustion chamber 18 temperature sensors 19 and 20 are provided respectively, and by their output signals control valves 21 and 22 are controlled. Further, between the outer cylinder 8 and inner cylinder 9 of the burner 2 compressed air 5 is sent from a compressor 1.



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